

PATENT
09/213,846

THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: : Group Art Unit: 2655
: Examiner: Opsasnick, M.
Scott A. Morgan et al. : Intellectual Property
Serial No: 09/213,846 : Law Department - 4054
Filed: December 17, 1998 : International Business
Title: SPEECH COMMAND INPUT : Machines Corporation
RECOGNITION SYSTEM FOR : 11400 Burnet Road
INTERACTIVE COMPUTER DISPLAY : Austin, Texas 78758
WITH SPEECH CONTROLLED : Customer No. 32,329
DISPLAY OF RECOGNIZED :
COMMANDS :
Date: 12/20/04 :

CERTIFICATE OF MAILING

I hereby certify that this correspondence including a Brief on Appeal (in triplicate) is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450 on 12/20/04.

J.B. Kraft

J.B. Kraft 12/20/04
Signature Date

TRANSMITTAL OF APPELLANTS' BRIEF UNDER 37 CFR 1.192(a)

Commissioner for Patents
P.O. Box 1450
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Sir:

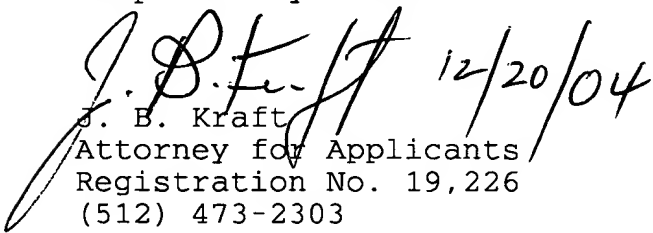
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Attached is Appellants' Brief (in triplicate) in this Appeal from a decision of the Examiner dated August 5, 2004 finally rejecting claims 1-9.

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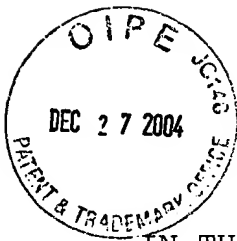
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Respectfully submitted

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BRIEF ON APPEAL

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Sir:

This is an Appeal from the Final Rejection of Claims 1-9 of this Application. Appendix VIII containing a copy of each of the Claims is attached.

I. Real Party in Interest

The real party in interest is International Business Machines Corporation, the assignee of the present Application.

II. Related Appeals and Interferences

None

III. Status of Claims

A. TOTAL NUMBER OF CLAIMS IN APPLICATION

There are 9 claims in this Application.

B. STATUS OF ALL THE CLAIMS

1. Claims cancelled: None.
2. Claims withdrawn from consideration but not cancelled: None.
3. Claims pending: None.
4. Claims allowed: None.
5. Claims rejected: 1-9.

C. CLAIMS ON APPEAL

Claims on appeal: 1-9.

IV Status of Amendments

No amendments have been filed after Final Rejection.

V. Summary of Claimed Invention

The present invention is directed to command control technology, wherein, for example, a user may navigate through a computer system's graphical user interface (GUI) by the user speaking the commands which are customarily found in the systems' menu: e.g., text, icons, labels, buttons, etc.. Many deficiencies in speech recognition both in word processing and in command technologies result from inherent voice recognition errors due in part to the status of the technology and in part to the variability of user speech patterns and the user's ability to remember the specific commands necessary to initiate actions. In word processing, visual feedback which confirms input is inherent, since the purpose of the process is to translate from the spoken to the visual. However, in speech recognition driven command and control systems, the user must often refer to command menus by switching back and forth from a natural speech input mode of operation to command menus. To do this, the user must make a sequence of manual inputs through his mouse and/or keyboard. Such manual operations get in the way of interactive users who must or wish to input to the system in a fully voice activated or conversational manner.

The present invention provides a solution for users of voice recognition systems who still need visual feedback in order to confirm the accuracy of spoken commands but need to operate in a "hands-off" mode with respect to computer input. The invention comprises means responsive to a detected speech command for displaying said command for a predetermined time period, during which time the user may give a spoken command to stop the system action designated by said displayed command. If the system action is not

stopped during said predetermined time period, the system action designated by the displayed command will be executed.

VI. Grounds of Rejection

Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goldhor et al. (US5,231,670) in view of White (US5,386,494).

VII. Argument

Applicants submit that claims 1-9 are unobvious over Goldhor in view of White, and thus are patentable under 35 U.S.C. 103(a). The basic Goldhor et al. patent may be directed to similar subject matter as the present invention. However, it is not directed to the same problems as the present invention, and does not disclose any solution over which the present invention would be obvious.

It should be noted that the present invention is not primarily concerned with speech dictation or "speech to text" recognition systems wherein the spoken terms are recognized for word processing purposes. Rather, the present invention is directed to speech or voice recognition of spoken commands used to control systems for a wide variety of purposes including control commands which could be used for the control of speech recognition word processing systems.

Goldhor Patent

Applicants make this distinction because the Goldhor system deals with both command recognition and spoken text recognition. However, Goldhor et al. deal with command recognition and processing in a manner quite different from Applicants' processing of commands. As will be hereinafter shown, the Examiner in applying Goldhor's disclosure does

not distinguish Goldhor's processing of commands from Goldhor's processing of spoken text and seems to be inappropriately combining elements from Goldhor's command processing with Goldhor's spoken text processing in the attempt to anticipate Applicants' invention.

Response to Examiner's Arguments.

Goldhor et al. does not disclose displaying commands for any predetermined time period or executing the actions designated by the commands if not stopped during time period. In this connection, the Examiner has pointed to col. 5, lines 40-55 for this disclosure. When this section discusses displaying sets of candidates and best match candidates, it is discussing only the conventional text processing expedient of presenting candidates for detected spoken vocabulary words. Nowhere is there any discussion of displaying commands for any purpose.

Actually, in the whole related section, col 5, lines 17-55 referenced by the Examiner, Applicants can not find any reference to the display of anything for a predetermined period of time, let alone the execution of a command if such execution is not stopped during that period of time by a voice command.

White Does Make up for the Deficiencies of Goldhor.

The White reference does disclose display of spoken commands but it does not disclose or suggest displaying recognized command for a predetermined time period or executing the action designated by displayed command if not stopped by a voice command.

In White, the user must depress the voice button 28 on the positioning device 24 in order to use all of the voice functions. While the voice button 28 is depressed, all of

the voice functions including display of the command are operable. Upon the release of the voice button 28, all voice functions cease including the display of the spoken commands. Thus, White fails to disclose the display of the recognized command for a predetermined period of time. The time is determined only by how long the user depresses the button. Also, there is no teaching of any sort of voice command to stop the displayed command in White. The execution of the displayed command in White may be stopped only by releasing the voice button; there is no voice command.

Thus, even if the teachings of and Goldhor and White could be combined, there would be no teaching of displaying recognized command for a predetermined time period or executing the action designated by displayed command if not stopped by a voice command.

Examiner's Argument

In the Final rejection (Section 3) in response to Applicants arguments, the Examiner makes some remote connection between the terms "further processing" (col. 5, line 55), and "null dictation event" (col. 5, line 38) to provide an alleged teaching of displaying a recognized command for a predetermined period, and then carrying out the displayed command unless stopped by another voice command. This alleged connection totally escapes Applicants' understanding.

It appears that the "dictation events" in Goldhor are not even spoken terms but some sort of processing steps. Thus, if the term "further processing" has any significance, it relates to such processing steps. It appears unrelated to even the spoken text.

In determining questions of obviousness over prior art, as herein, it is important that obviousness be determined only in the light of the alleged prior art, and not with the benefit of hindsight based upon the present invention itself.

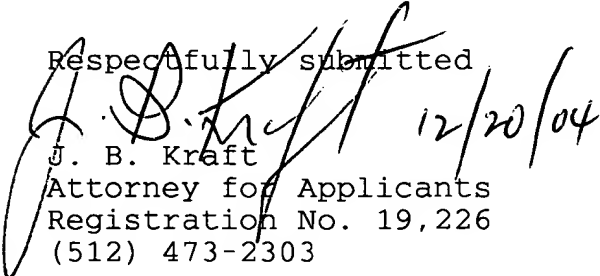
Without the benefit of the teaching of the present invention, it is hard to imagine one skilled in the art going through these mental gymnastics of the Examiner in trying to somehow connect these remote elements: "null dictation events", and "further processing" in an attempt to render the present invention as obvious.

VII. Conclusion

In view of the foregoing, it is submitted that claims 1-9 are patentable under 35 U.S.C. 103(a) over Goldhor et al. (US5,231,670) in view of White (US5,386,494).

Therefore, it is respectfully requested that the Final Rejection of these claims be reversed, and that claims 1-9 be found to be in condition for allowance.

Respectfully submitted

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VIII. Appendix of Claims

1 1. In an interactive computer controlled display system
2 with speech command input recognition, apparatus for
3 confirming the recognition of a command comprising:
4 means for predetermining a plurality of speech commands
5 for respectively designating each of a corresponding
6 plurality of system actions,
7 means for detecting said speech commands,
8 means responsive to a detected speech command for
9 displaying said command for a predetermined time period,
10 speech command means for stopping the system action
11 designated by said displayed command, and
12 means for executing the system action designated by
13 said displayed command in the event that said system action
14 is not stopped during said predetermined time period.

1 2. The system of claim 1 further including speech command
2 means for executing the system action designated by said
3 displayed command prior to the expiration of said time
4 period.

1 3. The system of claim 2 wherein said speech command means
2 for executing said system action prior to said time period
3 expiration is responsive to a repetition of the detected
4 speech command.

1 4. A method for confirming speech command input to an
2 interactive computer controlled display system with speech
3 command input recognition comprising:
4 predetermining a plurality of speech commands for
5 respectively designating each of a corresponding plurality
6 of system actions,
7 detecting said speech commands,
8 responsive to a detected speech command, displaying
9 said command for a predetermined time period,
10 enabling a speech command for stopping the system
11 action designated by said displayed command, and
12 executing the system action designated by said
13 displayed command in the event that said system action is
14 not stopped by said enabled speech command during said
15 predetermined time period.

1 5. The method of claim 4 further including an enabled
2 speech command for executing the system action designated by
3 said displayed command prior to the expiration of said time
4 period.

1 6. The method of claim 5 wherein said speech command for
2 executing said system action prior to said time period
3 expiration is a repetition of the detected speech command.

1 7. A computer program having program code included on a
2 computer readable medium for confirming speech command input
3 recognition in an interactive computer controlled display
4 system comprising:
5 means for predetermining a plurality of speech commands
6 for respectively designating each of a corresponding
7 plurality of system actions,
8 means for detecting said speech commands,
9 means responsive to a detected speech command for
10 displaying said command for a predetermined time period,
11 speech command means for stopping the system action
12 designated by said displayed command, and
13 means for executing the system action designated by
14 said displayed command in the event that said system action
15 is not stopped during said predetermined time period.

1 8. The computer program of claim 7 further including speech
2 command means for executing the system action designated by
3 said displayed command prior to the expiration of said time
4 period.

1 9. The computer program of claim 2 wherein said speech
2 command means for executing said system action prior to said
3 time period expiration is responsive to a repetition of the
4 detected speech command.